MULTIMEDIA UNIVERSITY

STUDENT ID NO

MULTIMEDIA UNIVERSITY

FINAL EXAMINATION

TERM 2230, 2022/2023

BPO 2064 – Production and Operations Management

(All sections / Groups)

6th Oct 2023
9.00 a.m. – 11.00 a.m.
(2 Hours)

INSTRUCTIONS TO STUDENTS

1. This question paper consists of FOUR (4) pages excluding cover page with EIGHT (8) questions only.

2. Answer ALL questions. The marks distributions are given in parentheses.

QUESTION 1

All good managers perform the basic functions of the management process. Operations Managers apply this management process to the decisions they make in the Operations Management function. Example: Mr. Zex oversees operations for a global business in Cyberjaya. Help Mr. Zex to identify the 10 Strategic Operations Management Decisions and explain briefly each of its significant functions addressed in the context.

(20 marks)

QUESTION 2

"The mission and strategy of the operations department should be aligned with the central mission and strategy of the company." Please define:

a) Mission. (3 marks)

b) Strategy (3 marks)

QUESTION 3

To empower employees and implement Total Quality Management (TQM), everyone in the organization must be trained in the techniques of TQM.

a) What are seven tools of TQM? (7 marks)

b) Explain briefly the functions of each QC tools in Quality Management System. (7 marks)

QUESTION 4

Forecasting is the process of predicting future demand for products or services. It is an essential tool for production and operations management, as it helps to ensure that the right amount of product is produced at the right time.

a) Name 3 types of Qualitative Forecast Methods. (3 marks)

b) Name 4 types of Quantitative Forecast Methods. (4 marks)

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QUESTION 5

Sadam Nadeem, owner of German Manufacturing, needs to expand his capacity. He is considering 3 locations, Amsterdam, Monaco and Croatia. The company wishes to find the most economical location for an expected volume of 1,000 per year.

Nadeem conducts locational cost-analysis. And below are the data:

Location	Fixed cost (RM)	Variable cost (RM)	Total cost (Fixed + Variable cost)
Amsterdam	15,000	60 x 1000 = 60,000	75,000
Monaco	30,000	30 x 1000 = 30,000	60,000
Croatia	55,000	15 x 1000 = 15,000	70,000

a) For each of the three locations, plot the fixed costs and total cost (fixed cost + variable cost):
Scale for Axis X = 1cm : 250 pieces
Scale for Axis Y = 1cm : RM10,000 (5 marks)

b) Which location is the cheapest when desired quantity is less than 500 pieces? (1 mark)

c) Which location is the cheapest when desired quantity is 1000 pieces? (1 mark)

d) Which location is the cheapest when desired quantity is 2000 pieces? (1 mark)

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QUESTION 6

The objective of supply chain management is to structure the supply chain to maximise its competitive advantage and benefits to the ultimate consumer. In the process of building a supply chain base, firm applies 5 stages of supplier selection approaches which consists of supplier evaluation, supplier development, negotiating, contracting and centralized purchasing. Elaborate the 5-stage processes. Each processes carries different marks allocation.

a) Supplier evaluation (6 marks)

b) Supplier development (2 marks)

c) Negotiating (6 marks)

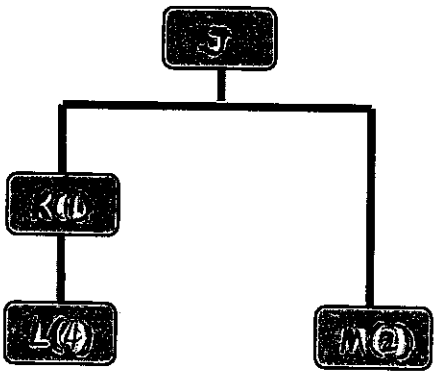
d) Contracting (2 marks)

e) Centralized purchasing (2 marks)

QUESTION 7

Dependent Inventory Model Requirement

a) You have developed the following simple product structure of items needed for your gift bag for a rush party for prospective pledges in your organization. You forecast 200 attendees. Assume that there is no inventory on hand of any of the items. Explode the bill of material. (Brackets indicate the number of units required.) (4 marks)



Continued.....

b) You are expected to have the gift bags J in question a) at 5pm. Below are the lead time for each items:

i) 1 hour to assemble 200 pieces of J

ii) 2 hours to assemble 200 pieces of K

iii) 1 hour to assemble 800 pieces of L

iv) 4 hour to assemble 400 pieces of M

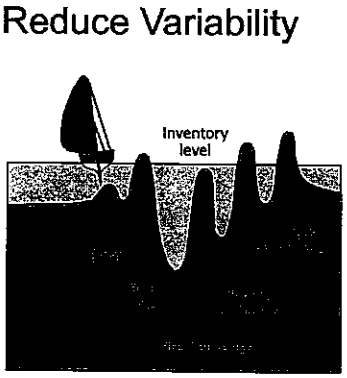
Develop a time-phased assembly plan to prepare 200 pieces of J. (10 marks)

c) What time should you start with the assembly of M? (1 mark)

QUESTION 8

Lean Inventory

Inventories in production and distribution system often exist "just in case" something goes wrong. The "extra" inventory is then used to cover variations or problem. Lean inventory tactics require "just in time", not "just in case". Explain how Lean Management addressed these 5 issues as shown in the diagram below. (12 marks)



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